AMOS Newsletter

Issue 0 • AMOS User Club

Welcome!

A very warm welcome to issue 0 of the AMOS Club Newsletter. My name is Aaron Fothergill, the editor of the Club, and editor of the very successful STOS Club. You are now the proud owner of a staggeringly-powerful language which will enable you to create some very professional-looking software. Stephen Hill and the staff at Mandarin Software have worked long and hard to produce the 300-page manual, but it cannot hope to cover every aspect of AMOS. The aim of the Club is to guide you through the complexities of AMOS and keep you right up to date with the latest developments from Mandarin and other third-party developers. You'll also have access to the very latest AMOS public domain programs – and I encourage you to send in your efforts for everyone to see. In addition you will be able to ring the AMOS Hotline at any time of the day or evening (within reason!) and get immediate help with any questions you may have. You'll find details of how to join the Club on page 6.

I do hope you enjoy reading this eight-page preview, and may I wish you many hours of enjoyment using AMOS.

Aaron Fothergill

(Author of Magic Forest and the AMOS Sprite and Map Designers)

AMOS game in shops!

The first commercial release of a game written entirely in AMOS is already on sale at retailers nationwide. Cartoon Capers is released by Mandarin Software (of course) and really shows what AMOS can do. Amazingly it runs much faster and smoother than the ST version which was written in STOS and then compiled! It only goes to show how much work has gone into producing AMOS and how much it makes use of the custom graphics chips built into every Amiga. You'll find further information about Cartoon Capers elsewhere in this issue.

Educational titles

AMOS has already become the language to use when it comes to writing educational software. Not only is there Fun School 3 from Database Software (released at the beginning of July), but there's also Learn to Read with Prof from Prisma Software, Primary Maths Course and others from LCL, Let's Spell at the Shops and Let's Spell in French from Softstuff, and more to come. All these companies have decided that AMOS is the perfect package for producing professional software both quickly and easily.

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Even more speed

AMOS is very fast and you can produce some amazing games that your friends will be convinced that you wrote in machine code. But AMOS will be even faster when the Compiler is completed. François Lionet is already working on this and you can expect to see the package in the shops before Christmas. As with the STOS Compiler, you can expect the AMOS Compiler to produce programs which run up to twice as fast as the interpreted versions. The price has yet to be announced.

About bugs

With more than 500 commands it's virtually impossible for AMOS to be bug free, despite the fact that so many developers have been working with AMOS for the last few months. However, due to Mandarin and François setting very high standards, STOS is for all intents and purposes bug free, and we can expect a similar attention to detail and speedy fixing for AMOS. The AMOS Club will keep you up-to-date with any problems encountered, and you will be able to get updates very quickly direct from Mandarin or from the PD library.

If you do encounter problems or bugs, please inform Mandarin Software. It's best if you can send the offending program which causes the problem – this will help them to locate the bug quickly and easily.

3D dexterity

AMOS 3D is coming along amazingly well. It received its first unveiling at the ECT Show, a trade-only exhibition in April where it caused quite a stir among journalists and dealers. With AMOS 3D you'll be able to design solid 3D objects and spin them in realtime – the effect is staggering. And you should be able to produce a game along the lines of Starglider without too much difficulty. The package has been put together by Voodoo Software, developers of the 3D game Xiphos from Electronic Zoo. They've taken the routines which took them 18 months to produce and are offering them to Amiga owners for them to use in their own games and demos. AMOS 3D and STOS 3D should be in the shops by the end of August.

Change of name

You may be wondering why STOS is called The Game Creator and AMOS is called The Creator. Well the reasoning is pretty straight forward according to Mandarin's Chris Payne. He says that he saw so many educational programs, demos, databases, financial programs and so on written in STOS that he considered the word Game to be a bit of a misnomer. He didn't want Amiga owners to think that AMOS was only good for writing games, so he changed the name.

STOS in a box

You may not be surprised to discover that because STOS has been so successful (with Mandarin receiving letters to say that people had bought an ST to use STOS) Atari are now bundling STOS with every 520ST sold for the next year.

With a guarantee of 60,000 sales on top of the 40,000 copies that Mandarin sold itself, there will be 100,000 users of STOS altogether. How long will it be before Commodore decides to bundle AMOS with every new Amiga it sells?

AMOS book under way

Stephen Hill, author of the very comprehensive AMOS manual is already hard at work on a book which will go into more detail about writing games in AMOS. He has already had considerable success with his last book: The Gamemaker's Manual: Atari ST and STOS Basic. Stephen says that there will be some crossover with his STOS book but there will be many new sections because of the extra power of AMOS. The book will be available at the end of the year from Sigma Press. ■

Bounce

by Aaron Fothergill

One of the many features of the AMOS Club Newsletter are the 10-Liner competitions where you have to write a program in AMOS, within what at first might seem to be very tough limits. These rules are:

- The program must not be more than 10 lines long. As a line in AMOS can be very long, each *line* can only be 160 characters (about two lines) in length.
- The program must not use more than 10k of external files, or must use only files from the original AMOS discs, (such as the sprite banks etc).
- Absolutely no machine code. (You can get a lot of machine code in 10k!)

This might seem a little difficult at first. However some great games and utilities can be written in 10 Lines. In a recent STOS Club competition, the winning game was a complete submarine shoot-em-up, and the winning utility was a virus killer, and AMOS has almost twice as many commands as STOS, thus making life even easier!

Just to get you started, here's a very simple 10-line game, utilising the picture and sprite files of the Magic Forest game on your AMOS data disk. The object is to catch apples which will fall from the top of the screen, and bounce around at random angles. If an apple runs out of bounce, you are dead.

You will find useful routines in this program to make a sprite walk with the joystick, and how to make an object fall and bounce with moderate realism.

By the way, this game only took 15 minutes to write. You don't need to type in the line numbers – they are only for reference.

```
1 Hide On : Flash Off : Curs Off : Paper 0
: Cls : Erase 1 : Dir$=”Df0:Magic_Forest”
: Load “MFSPRITES.ABK” : Load iff
“Magic_Forest.IFF”,0
2 X=160 : D=1 : T=0 : SC=0 : Paper 0 :
Pen 15 : Locate 0,0 : Print “Score: 0” :
Repeat
3 Catch=0 : A=Rnd(2)+16 :
AX=Rnd(300)+10 : AY=0 : DY=8 : DY2=8 :
DX=0 : B=0
4 Repeat : Bob 1,X,192,D*3+T/6+1 : Add
T,1,0 To 17 : Bob 2,AX,AY,A : Wait Vbl
5 Add AY,DY : Add AX,DX,0 to 319 : If T
Mod 4=0 Then DY=Min(DY2,DY+B)
6 If AY>=192 Then Dec DY2 : DY=-DY2 :
DX=Rnd(4)-Rnd(4) : B=1
7 D=1 : Z=Bob Col(1) : If Jleft(1) Then
Add X,-2,0 to 319 : D=0
8 If Jright(1) Then Add X,2,0 to 319 : D=2
9 If Col(2) Then CATCH=1 : SC=SC+A-15
: Shoot : Home : Print “Score:”;SC
10 Until DY2<=0 or CATCH=1 : Until
DY2<=0 : Locate 0,10 : Centre “GAME
OVER” : Wait Key
```

■

Mandarin Software is keen to find programmers to write the following applications for possible publication:

- font editor
- adventure game creator
- sampled sound editor to work with most cartridges
- word processor
- database
- spreadsheet
- business graphics
- feature-packed art program
- fractal landscape creator
- ray tracing program
- collections of animated sprites
- original games
- variations on 'classic' games

...in fact anything that will appeal to other AMOS users or even non-AMOS users. Mandarin will pay an outright sum or royalties at the standard industry rate.

Please write to Richard Vanner, Development Manager at Mandarin Software in Macclesfield – or ring him on 0625 859333 between 2 and 3pm.

Public Domain Library

What it's about

Listed on this page are the first discs to enter the AMOS Public Domain library. We intend to fill the library with useful utilities, graphics, sound resources – in fact anything to do with AMOS. With AMOS 3D on the horizon we plan to supply additional 3D object data discs through the library.

We also need your support. Over 90% of the PD discs in the STOS Club are supplied by members. By sharing your creations with other AMOS users everyone will benefit and it will help to spread the word about AMOS.

How it works

Each disc costs just £2.50 each – or £1.50 if you supply your own disc. If you order three discs or more, deduct 20p per disc (including the first three). For example, four discs will cost £2.30 each (£9.20 in total). Please add 25p postage per disc if you live in Europe – or 50p per disc if you live elsewhere in the world, otherwise your discs will be sent by surface mail!

Each disc has a specially-printed AMOS Public Domain sticker kindly produced by Mandarin Software so your PD discs will match the rest of your AMOS master discs.

Ring Sandra on 0942 217044 to find out about the latest public domain titles to be added to the library.

If you have any programs which may be suitable please send them along (preferably as unprotected Basic files).

Send cheques, postal orders or stamps to:

Sandra Sharkey,
78 Merton Road,
Highfield,
Wigan WN3 6AT.

APD1: *GMC (Games Music Creator).* A powerful and easy-to-use utility that allows you to create musical tunes. Uses all four channels and comes with DOC files. Use the GMC-to-AMOS convert program (found on your AMOS program disc) to alter a 'block' of music data and then play it back in AMOS using a simple MUSIC command. This disc also includes the source code for François' AMOS music routine.

APD2: *Treasure Search.* Hunt for treasure in this clever educational coordinates game by Peter Hickman, the author of Number Leap. Includes excellent graphics and sampled speech.

APD3: *Fonts disc 1.* This contains 14 typefaces including Times, Bookman, Helvetica and Tiny.

APD4: Fonts disc 2. 13 including Avant Garde, Celtic, Palo Alto, Basel, Peignot and Aldous.

APD5: Fonts disc 3. 14 including Broadway, Camelot, Future, Stencil and Vancouver.

APD6: Program which allows you to read ST discs on the Amiga – so you can load STOS programs.

APD7: *Virusx 4.0.* The Amiga's most widely-used virus killer. Will supply the newest version as it becomes available.

APD8: *Music tunes.* A collection of tunes by Allistair Brimble specially commissioned by Mandarin for AMOS. ■

AMOS Hotline

Membership has its privileges! Once you subscribe to the AMOS Club you will be given a number to ring for on-line technical help. Aaron Fothergill, author of Magic Forest, the Sprite Designer and the Map Editor will be on hand to help you with any AMOS-related subject.

First steps

by Aaron Fothergill

Many of you will have bought AMOS as your first proper version of BASIC (Amiga Basic doesn't count!), and so you may be experiencing difficulty in doing any form of programming. Fortunately for those of you who wish to write a 500-level HAM-mode mega-game, but don't know the difference between a subroutine and a submarine, the AMOS Club Newsletter will be running a regular feature called Absolute Beginners. The articles will be aimed at users who are only just starting out at programming, and will gradually work their way up to some serious games programming!

For this introductory newsletter, we will go through the basic knowledge that will come in useful when you are programming. Then you can type in the Apple Bounce 10-liner program (in this issue) and hopefully understand what is going on.

A Program

A program is simply a series of commands to the computer to tell it what to do. The computer will do only as it is told and EXACTLY as it is told. So you must think carefully about how to make the program do something. Compared to earlier Basics, AMOS makes things easy, as you have commands that will do what it used to take a whole program to do.

A Command

A command is an instruction to tell the computer to do a particular task. For instance the command PRINT tells the computer to output (or print) something to the screen. Most commands are followed by one or more PARAMETERS.

A Parameter

Parameters give the command values to work with. For instance, PRINT 3 would tell the program to display a 3 on the screen. Depending on the command, parameters can be numbers, strings or VARIABLES.

A Variable

Variables are storage spaces in memory where either numbers or strings (a series of characters or a chunk of text) are remembered.

Variables can be used just about everywhere as parameters. There are three basic types of variable:

Integers: Store whole numbers (these are the default AMOS variables).

Real: Stores floating point numbers (these are numbers which can include a decimal place). These variables have a hash (#) symbol after them.

Strings: Store a series of characters or a piece of text. These variables have a dollar ($) sign after them.

A very simple example

To demonstrate the use of variables, here is a small program. Type in the program then read the following text, which will explain what the program is doing.

```
Input A
B=A
A=A*2
Print B;" x 2 = ";A
End
```

The first command is INPUT, which tells the program to ask the user for a value (either a number or a string, or a series of either). Input always requires the input to go into a variable, so in this program we have told it to put the number into a variable called A.

Variable names can be as long as you want, as long as they start with a letter and contain only letters and numbers. As there is no hash or dollar sign after the variable name, the input command will expect an Integer number to be typed in. You will be asked to type again if you enter a string. If you enter a real number it will be rounded down to the nearest whole number.

The next line down copies the value in A into variable B. The equals sign tells AMOS to do the calculation to the right of the sign, and put the result into the variable to the left of the sign. On the next line, the same command is used to multiply A by 2 (an asterisk * is used instead of x for multiply to avoid confusion with the x character and / is used for divide). The result is then put into variable A (which replaces whatever value was in A previously).

The Print command is used to output values to the screen. It can be followed by almost any number of parameters, numbers, strings and variables. As always, AMOS works from left to right, so the value of variable B will be output first, the semicolon (;) tells the cursor to wait on that line (otherwise it will automatically go to the start of the next line down). Anything inside quotes (") is printed out as is, so the string *x 2 =* will be printed out, then after the closing quotes another semicolon is encountered, so the cursor will wait there.

The next thing to be printed is the value of variable A which, thanks to the multiplication on the previous program line, will now contain twice the value you entered.

Obviously this is only the very simplest of starts for programming in AMOS Basic. The Absolute Beginners series will be aimed at would-be programmers who have had some sort of experience with Basic, but it should enable the total beginner to be able to get to grips with what is effectively the most powerful programming language on the Amiga.

In Issue One of the newsletter, the Absolute Beginners article will show how to add a high score table onto the Magic Forest game. ■

This Newsletter was put together by Chris Payne and Richard Vanner, with editorial from Aaron Fothergill.

Join the club!

Now you've had a good read of this sample Newsletter we are sure that you will be keen to become a member of the dynamic AMOS Club. For just £10 (£12 Europe, £15 Overseas) you will receive six issues over the course of the next 12 months, each one packed with hints, tips, new product information, access to experts (like François Lionet, Aaron Fothergill, Peter Hickman and Stephen Hill), exclusive offers through the club, PD discs, articles for beginners and experts, contact names for fellow programmers, graphic artists, musicians and more – with 20 information-crammed pages an issue.

You'll also have access to the AMOS Hotline and the AMOS Public Domain Library – and any letter you send to the Club with an sae will receive a personal reply (questions will also be answered in the Newsletter).

All you have to do is send a cheque or postal order payable to The AMOS Club to: *The AMOS Club, 1 Lower Moor, Whiddon Valley, Barnstaple, North Devon EX32 8NW.*

Drop us a line!

Whether you've got a problem or just something to say, we'd like to hear from you.

We're on the lookout for letters, articles or suggestions to make the Newsletter as exciting and informative as possible. You can use old-fashioned pen and paper, but we'd be delighted to receive Ascii or Protext files together with a printout. Hope to hear from you soon!

Aaron

20 things you didn't know about AMOS and its creator

- François lives in a town called Yerres, located 12 miles from Paris. He was born on the 6th July 1963 in Maubeuge, a small town near Belgium.
- He is 26 years old, married to his wife Carine and they have a dog called Daisy!
- His two brothers are also as talented as himself. One is a dentist and married, and the other is a cardiologist, single and living in Tahiti!
- François' first computer was a Superboard II from Ohio Scientific, purchased in 1981. He was one of only a few French owners so he had to write his own 6502 assembler in Basic, and then his own games. He even wrote a full Defender game in 8k of memory.
- François wrote two games for Firebird Software: ***Chicken Chase*** (Oric, CPC and C64 – over 60,000 copies sold) and ***Olé*** (CPC). He also wrote three commercial Oric games for a French software house and a musical puzzle called ***Serenade*** for the Commodore 64.
- He wrote the ***Captain Blood*** conversions for the PC and C64 – most of the work was done in one month (fast, isn't he?).
- François programs on almost any microcomputer. But this has its problems: The worst case is programming on an Intel 8088 (IBM PC) and on a Motorola 68000 (Amiga) – Intel syntax works from right to left, and Motorola syntax from left to right!
- STOS took 18 months to write using Kuma's ***K-Seka*** assembler. It was first released in France in the Spring of 1988 but due to the way it was marketed it simply didn't take off.
- Mandarin bought the rights for STOS, added extra accessories and streamlined the package, then re-launched the product.
- STOS zooms into the Gallup chart to number one in September 1988 – wow!
- Françowas asked to write the Compiler after it was obvious STOS was a big hit. This time he uses the much faster ***Devpac 2*** assembler by Hisoft.
- AMOS is targetted as François' next project. This time though, it should be a simple matter of taking the ST source code and adapting it to the Amiga, making improvements to the system as he goes. How wrong we were! Due to François' brilliance and a lot of input from expectant users it took another 18 months solid work! Again using ***Devpac 2***. We're sure you'll agree it was worth the wait!
- He programs listening to loud music through his headphones. He had to build a flashing light to tell him that the phone was ringing!
- François' idols are Jes (Starglider) San, Bill (Sinbad) Williams, Jeff (Tripatron) Minter and all the Captain Blood team. He really would like to be like them when he greaus (sic!) up.
- François descibes himself as: Perseverant, happy and messy (but not in his programs though).
- His favourite film is Brazil and he enjoys all the wacky Monty Python programs (don't we all).
- François likes: Ski-ing, squash, tennis, playing the piano, reading SF and comics (French ones, not The Dandy!), sailing boats, holidaying, sun-bathing, girls.
- Asked, if you were to be re-incarnated what would you return as, François replied: As my dog Daisy! She sleeps when she wants, eats and plays all day – what more could one ask of from life?
- He enjoys to program sprite and bob routines the most and hates hacking out sorting procedures and structure handling code.
- Once he had acclimatised to the Amiga, François disowned his ST! Once an Atarian now a Commodore man. The only hate he has about the Amiga is its terrible floppy disc access (I think we all hate it). ■

WIN £5,000 CASH!

Yes, you could win £5,000 cash in the AMOS Gameswriter of the Year Competition.

The writer of the most commercially-viable game submitted by December 31, 1990 will receive £5,000 in advance royalties and the title will be marketed worldwide by Mandarin Software.

Mandarin is looking for an exciting, original idea with the emphasis on gameplay. Graphics are secondary and, if necessary, a professional graphic artist will enhance the visual aspect of the winning title.

RULES

- Your game must be written entirely in AMOS Basic.
- Your game must take up no more than two discs. Extra weight will be given to games which run on the basic A500 without extra ram.
- Copyright for the winning game will belong to Mandarin Software who will market the game. A royalty will be paid for every copy sold, and royalties will also be paid if the game is converted to other formats.
- In the unlikely event that no commercially-viable game is received, the money will be added to the cash prize for the following year's competition.
- The competition is not open to the staff at Mandarin or Jawx, or their families.

Please note that if you submit a game you are quite free to offer it to other software houses for publication. Only the winning title, with the agreement of the programmer, will become the copyright of Mandarin Software.

Cartoon Capers was the winner of the 1989 STOS Gameswriter of the Year Competition, despite the fact that the game was only at an early stage in its development at the time. Mandarin loved the cute graphics and wacky sense of humour. Author Simon Cook received a cheque for £5,000 and the ST version went on sale on May 22 this year.

Simon went on to write the Amiga version in AMOS and this went on sale just after the launch of AMOS. Check it out at your local dealer – it's an amazing advert for AMOS as you won't believe it wasn't written in machine code!

Games Galore is a fabulous collection of STOS games made up of runners-up in the STOS Gameswriter Competition. The programmers received an equal split of the royalty for their efforts. Mandarin intends to do one or more compilations of AMOS games as soon as possible – so get programming!